



■ Features and Options

- **Low Pressure Loss** The AquaMatic Y-pattern design permits higher flow than other comparably sized diaphragm operated valves.
- **Positive Control** Larger diaphragm area compared to seat area permits drip tight closing without any springs.
- **Cost Effective** Diaphragm acts as an actuator, eliminating the need for electric or pneumatic actuators, which minimizes initial investment and maintenance costs. All internal parts are replaceable without removing valve from piping.
- **Durable** Stainless steel (CF8M) corrosion resistant alloy, all metal internals machined from 316 stainless steel alloy, Nitrile elastomer seals and pre-formed stress-relieved diaphragm offers excellent service life. All metal parts are passivated to improve corrosion resistance.
- **Design and Application Engineering Assistance**
- **Optional Seal and Diaphragm Materials Available**
- **Resistant to Corrosive Atmosphere**
- **Optional Adjustable Flow Control**
- **Optional Spring Assist (Open or Closed)**
- **Optional Position Indicator**
- **Available in Threaded and Flanged End Configurations**

■ Specifications

Standard Materials

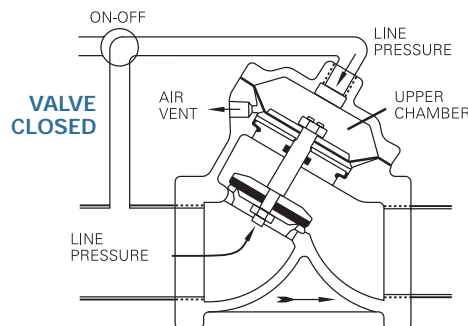
Valve body, shaft and cap cast 316 stainless steel (CF8M) alloy, all metal internals 316 stainless steel, standard seals Nitrile, diaphragm Nitrile on Polyamide

Optional Materials

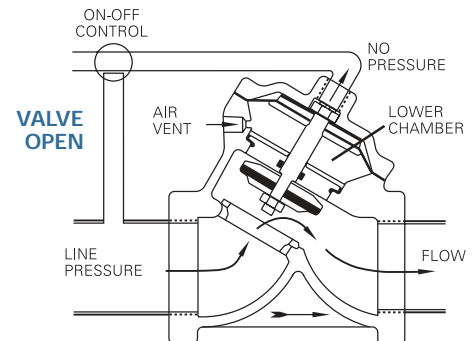
Seals EPDM or FKM elastomers, diaphragm FKM on Polyester

- **Maximum Working Pressure** Threaded Valves, 250 PSI (17 bar)
Flanged Valves 150 PSI (8.5 bar)
- **Temperature** 150°F (65°C) standard
250°F (120°C) maximum
- **Pipe Sizes** 1, 1-1/2 and 2-inch threaded (NPT, BSPP, JIS)
1, 1-1/2 and 2-inch flanged (U.S. or ISO)

■ Principles of Operations



Drip-Tight Closing: Closure is obtained by directing line pressure or equivalent independent pressure into the upper chamber. This pressure on the large diaphragm area causes the valve disc to seal against the seat.

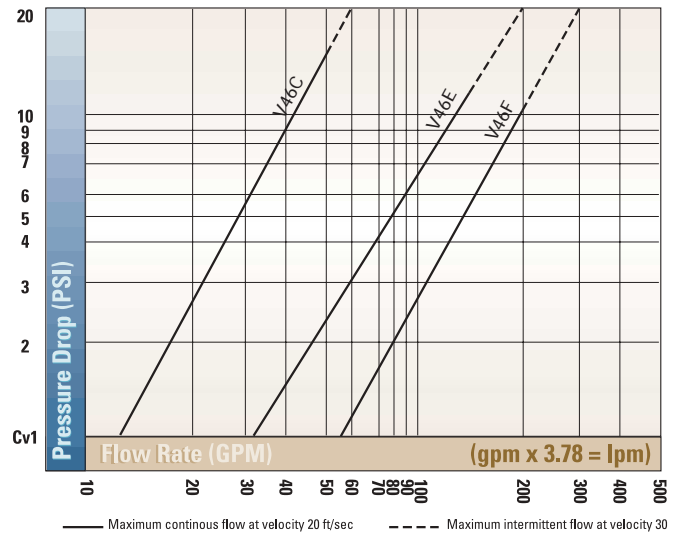


Full Open Operation: When the closing pressure in the upper chamber is relieved by venting the pilot line, the valve opens positively, by line pressure on the disc.

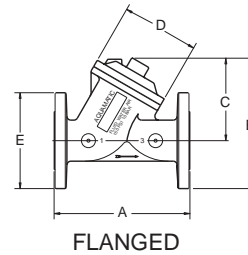
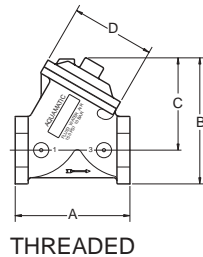
Applications

- Reverse Osmosis Equipment
- Laundry Equipment
- Corrosive Liquid Handling
- Process Water Systems
- Ozone Generators
- Steam Sterilization
- Bottling Plants
- Chemical Injection
- De-Ionization Units
- Paper and Pulp
- Condensate Polishers

Flow Thru Metal Diaphragm Valves



Dimensions for Stainless Steel Valves



	Pipe Size	Model Number	Cv ¹	Dimensions (Approximate)					
		460 Series		Unit	A	B	C	D	E
Threaded	1"	V46C	13	IN. mm	3.75 95	4.45 113	3.21 82	2.75 70	
	1-1/2"	V46E	32	IN. mm	4.75 121	5.00 127	3.50 89	3.50 89	
	2"	V46F	54	IN. mm	6.62 168	7.28 185	5.34 136	4.84 123	
Flanged	1"	V46C	13	IN. mm	5.50 140	5.49 139	3.36 85	2.75 70	4.25 108
	1-1/2"	V46E	32	IN. mm	6.50 165	6.45 164	3.95 100	3.50 89	5.00 127
	2"	V46F	54	IN. mm	8.50 216	8.16 207	5.16 131	4.84 123	6.00 152

¹ Cv is the flowrate in gallons per minute of water at 60°F at 1 pound pressure drop. Liters per minute = Gal/Min x 3.78

For More Information:
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